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Combat Engineering Equipment – Army Requirements

Hybrid Truck User Forum - September 2010

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- Brief background of the Combat Engineering organization and current mission
- Development of User Requirements
- DOD policy and future activity with respect to fuel saving technology

Mission Statement

Our mission is to develop, field and support construction equipment for the Army. Provide associated equipment to support construction and supply distribution operations. To provide technical support and focus for developmental and non-developmental programs which provide the optimal systems in response to User requirements for earthmoving and general construction tasks. To keep abreast of state of the art technologies, both foreign and domestic.



Current Environment

- Executing 12 new acquisition programs
 - Rapidly developing and fielding modified commercial and non-development systems
 - Introducing crew protection to new procurements as appropriate
- Technical support of more than 60 legacy systems
- Limited R&D activity with respect to fuel savings technology





Unique User Requirements



Capabilities documents define Key Performance Parameters (KPPs) and Attributes:

- Performance
- Transportability
- Military Tiedown Provisions
- Crew Protection
- Fuels and Lubricants
- Electromagnetic Environment Effects
- A/C Capability
- Cold Start Capability
- 24V Electrical w/ NATO Slave
- Military Unique Identification
- CARC Paint

- Current day KPPs and Attributes will continue to evolve with technology
 - Introduction of alternative fuels and lubricants
 - Enhanced survivability
 - Enhanced mobility and transportability
 - Enhanced levels of performance
- Future KPPs to address life cycle cost and specifically fuel savings should be expected
 - Paradigm Shift: no longer focus solely on operational capability without consideration for fuel consumption and logistics

National Defense Authorization Act for FY 2009

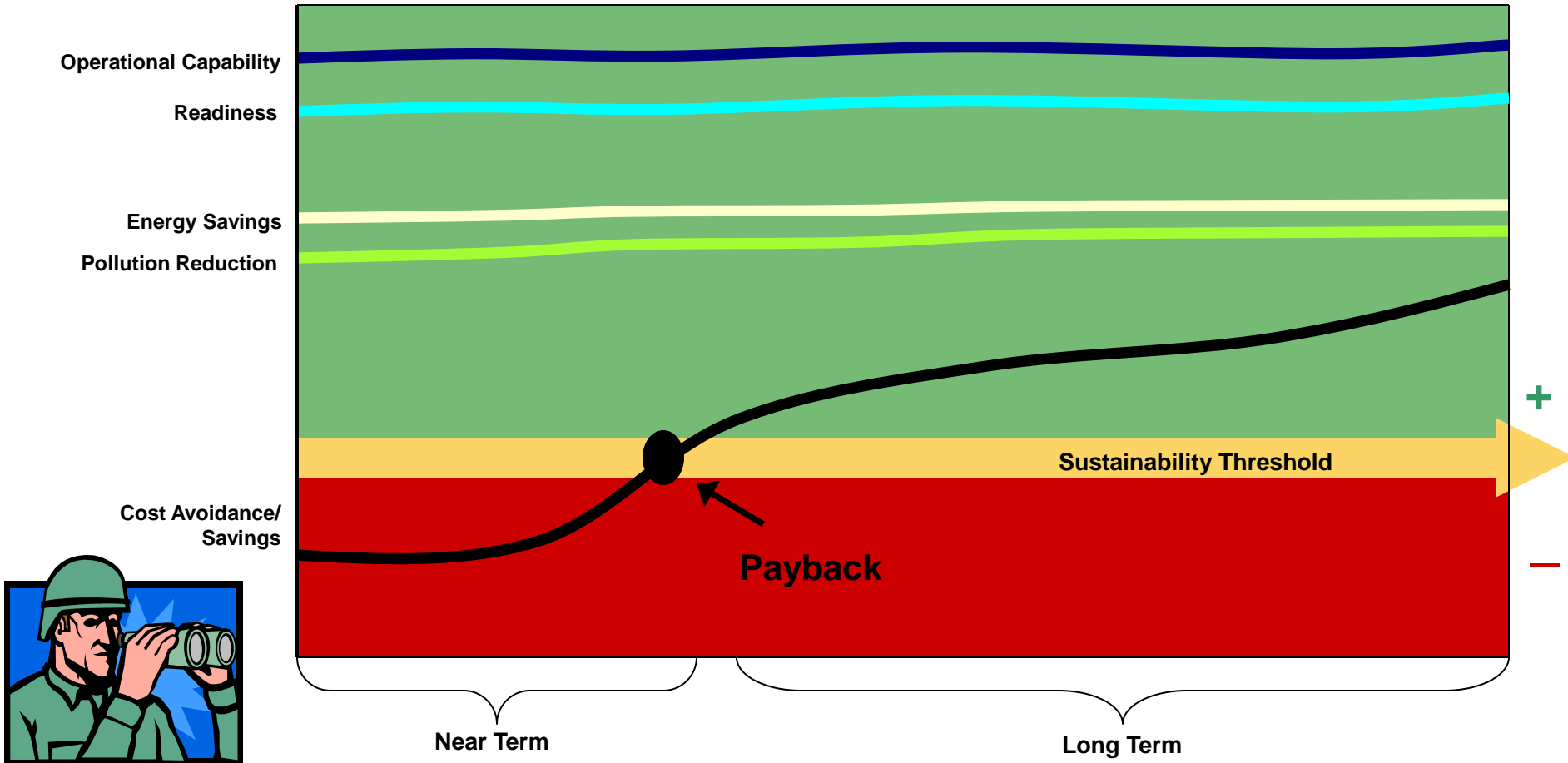
“The Secretary of Defense shall develop and implement a methodology to enable the implementation of a **fuel efficiency key performance parameter** in the requirements development process for the modification of existing or development of new fuel consuming systems.”

“The Secretary of Defense shall require that the life-cycle cost analysis for new capabilities include the **fully burdened cost of fuel** during analysis of alternatives and evaluation of alternatives and acquisition program design trades.”

“In the case of analyses and force planning processes that are used to establish capability requirements and inform acquisition decisions, the Secretary of Defense shall require that **analyses and force planning processes** consider the requirements for, and vulnerability of, **fuel logistics**”

FBCF is the commodity price plus the total life-cycle cost of all people and assets required to move and protect fuel from the point of sale to the end user.





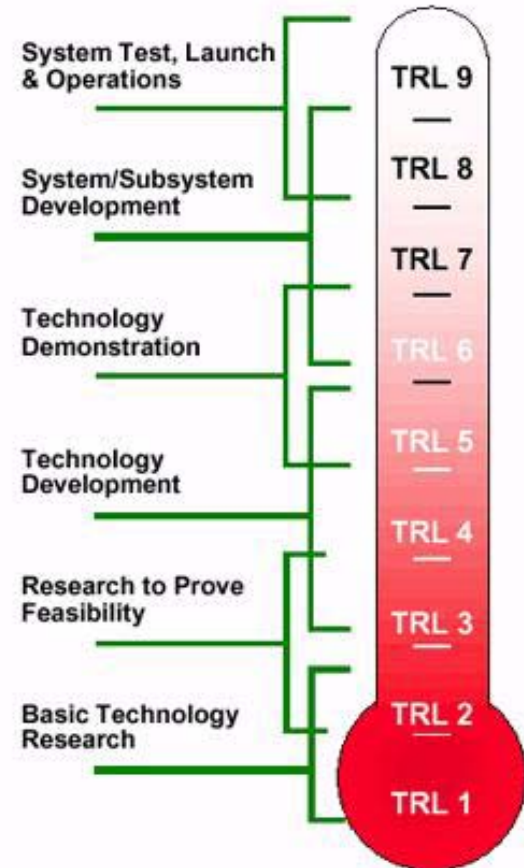
Army Decision Makers should *evaluate operational, energy, environmental and financial sustainability* in the near and long term.

Short Term:

- Determine if energy savings technology is good/bad for Army CE Equipment
- Maturation of Technology Readiness Level

Long Term:

- Introduction of fuel savings technology for commercial industry
- Introduction of Military specific technology based on the fully burdened cost of fuel



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